

Flight Path to Profitability: Country- Driven Analysis of Booking Behaviors and Route Performance

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AUGUST 2025

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Executive Summary

KEY FINDINGS:

- **Conversion rate disparities:** China demonstrates exceptional performance compared to Australia's critically low 5% conversion rate, despite Australia representing the largest market (36% of bookings). Malaysia's routes performance were consistent across all major routes. Top routes from South Korea show alarming failure rates with three routes at 0% conversion despite substantial booking volumes.
- **Distinct planning horizons:** South Korean travelers book furthest in advance, while Malaysian travelers show the highest proportion of last-minute bookings.
- **Service adoption patterns:** Both Australian and Malaysian travelers heavily prioritize extra baggage, while Chinese travelers show minimal interest in seat selection and meals.
- **Group size variations:** 69% of Australian bookings are for solo travelers, while Asian markets predominantly book for pairs.
- **Strategic destination importance:** Bali, Indonesia (DPS) appears prominently across multiple source countries' top routes, indicating its strategic importance in the network.
- **Stay duration patterns:** Asian markets overwhelmingly prefer short stays (<1 week) while Australian travelers show greater diversity in trip duration.

RECOMMENDATIONS:

Market specific conversion optimization strategy

- Australia: Create a dedicated task force to address the critically low 5% conversion for this largest market. Apply Malaysian booking flow elements to the Australian customer journey, with particular focus on solo traveler experience and longer-stay packages. Implement exit surveys to identify specific abandonment reasons.
- South Korea: Identify why three major routes have 0% conversion. Develop tailored content emphasizing advance booking benefits and pair-traveler incentives aligned with their early booking behavior.

Destination centric product strategy

- Develop market-specific Bali packages reflecting distinct stay durations (short-stay bundles for Asian markets vs. flexible longer-stay options for Australians) and group compositions (solo vs. pair configurations).

Study Objectives

GEOGRAPHIC MARKET ANALYSIS

To identify and quantify country specific booking behaviors and preferences across the top five source markets, enabling the development of tailored marketing approaches and service offerings that address the unique characteristics of each geographic segment.

STRATEGIC ROUTE PERFORMANCE ANALYSIS

To examine performance patterns across top-performing routes for each key source country, identifying the specific factors (lead time, service preferences, booking channels) that influence conversion rates on these routes and how they differ across markets.

Methodology

Data source

Public airline customer holiday booking dataset obtained from Kaggle (Kaggle.com)

About the dataset

This dataset provides comprehensive information about customers' preferences and behaviors related to airline holiday bookings. With detailed attributes covering various aspects of the booking process.

Analysis approach

Data Quality:

- Complete data (no missing values) for all variables except booking origins variable contains some "(not set)" values. Minimal impact, affected <0.5% of the dataset.

Data Limitation:

- All insights presented are based on data from August 2023. While market conditions may have evolved in the intervening two-year period, the behavioral patterns identified remain valuable for strategic planning.

Variable categorization:

- Lead time (duration between booking and travel dates) and length of stay were categorized into meaningful time intervals, with descriptive labels assigned to each range to facilitate pattern analysis.

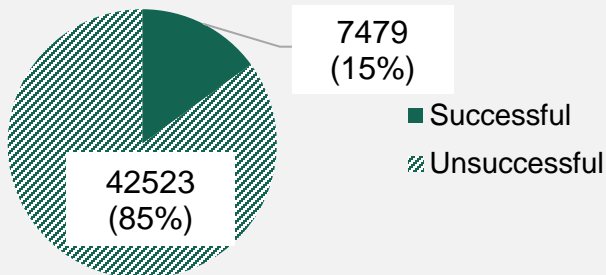
Data Overview

Available data points:

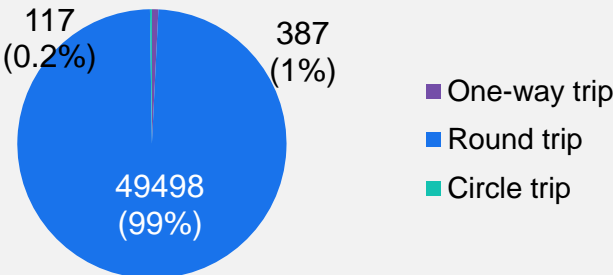
Booking characteristics	Flight details	Customer preferences	Target variable
<ul style="list-style-type: none">• Number of passengers per booking• How customer reached website (channel)• Trip type (one-way/round trip/circle trip)• Lead time (booking to travel duration)• Booking source country	<ul style="list-style-type: none">• Flight hour• Day of week• Flight route• Flight duration	<ul style="list-style-type: none">• Extra baggage request (Yes/No)• Meal request (Yes/No)• Preferred seat request (Yes/No)• Holiday stay duration	<ul style="list-style-type: none">• Holiday booking success (Yes/No)

Overall Booking Trends

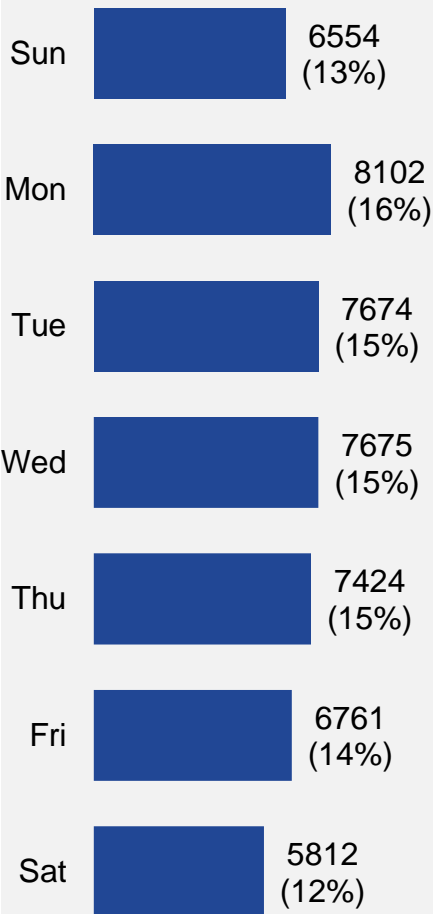
Conversion rate



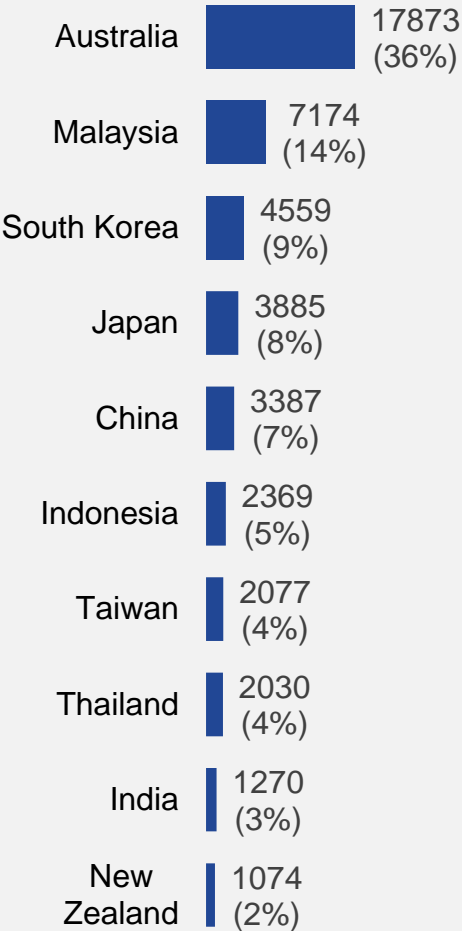
Trip type



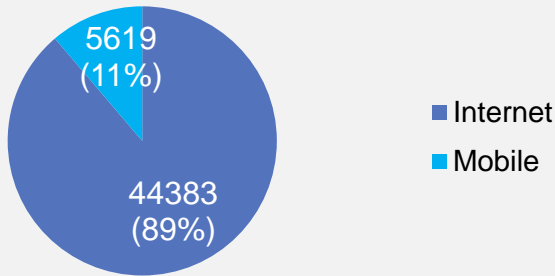
Booking volumes based on flight day



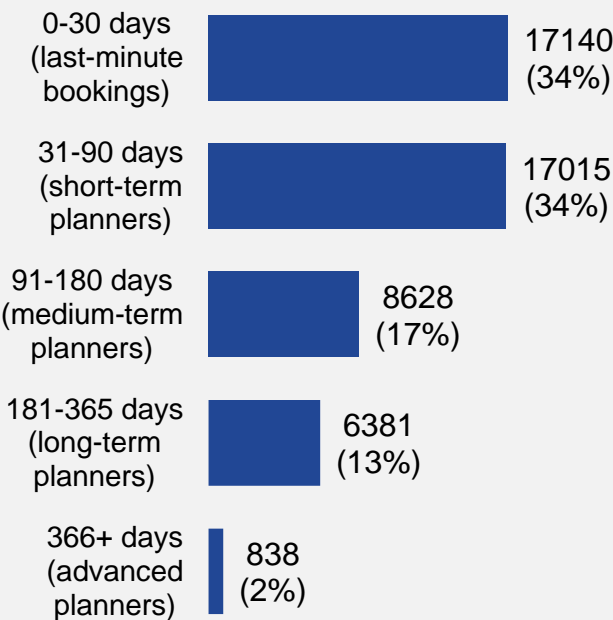
Top 10 booking source countries



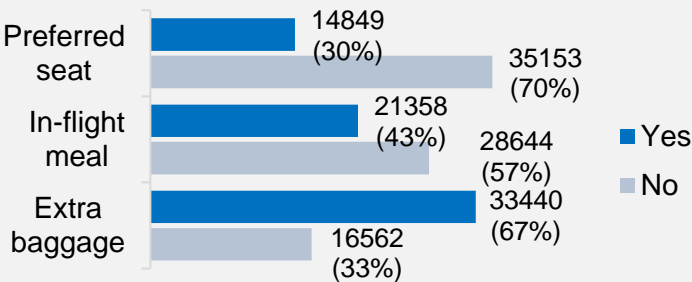
Channel used for booking



Lead time distribution



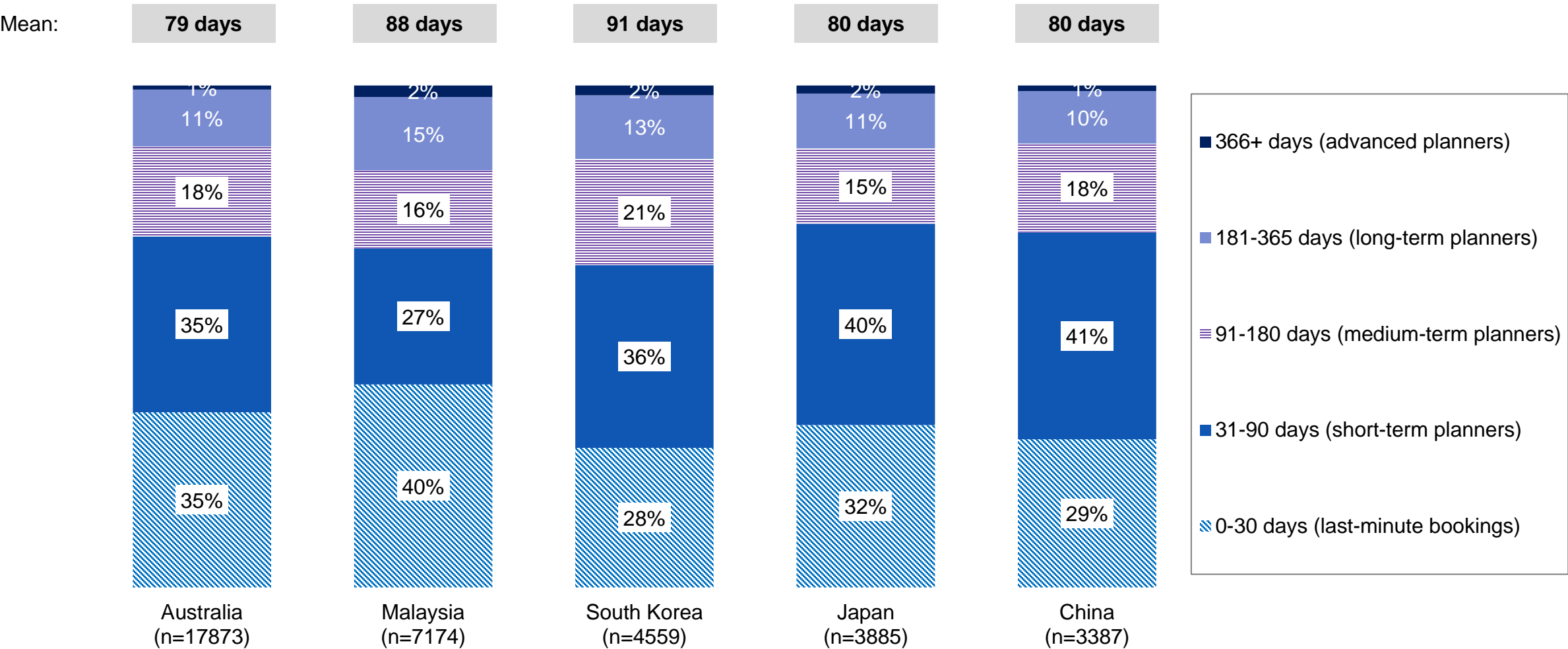
Extra service



Section 1: Booking Patterns Analysis by Country

South Korea plan furthest ahead while Malaysia has the most last-minute bookings

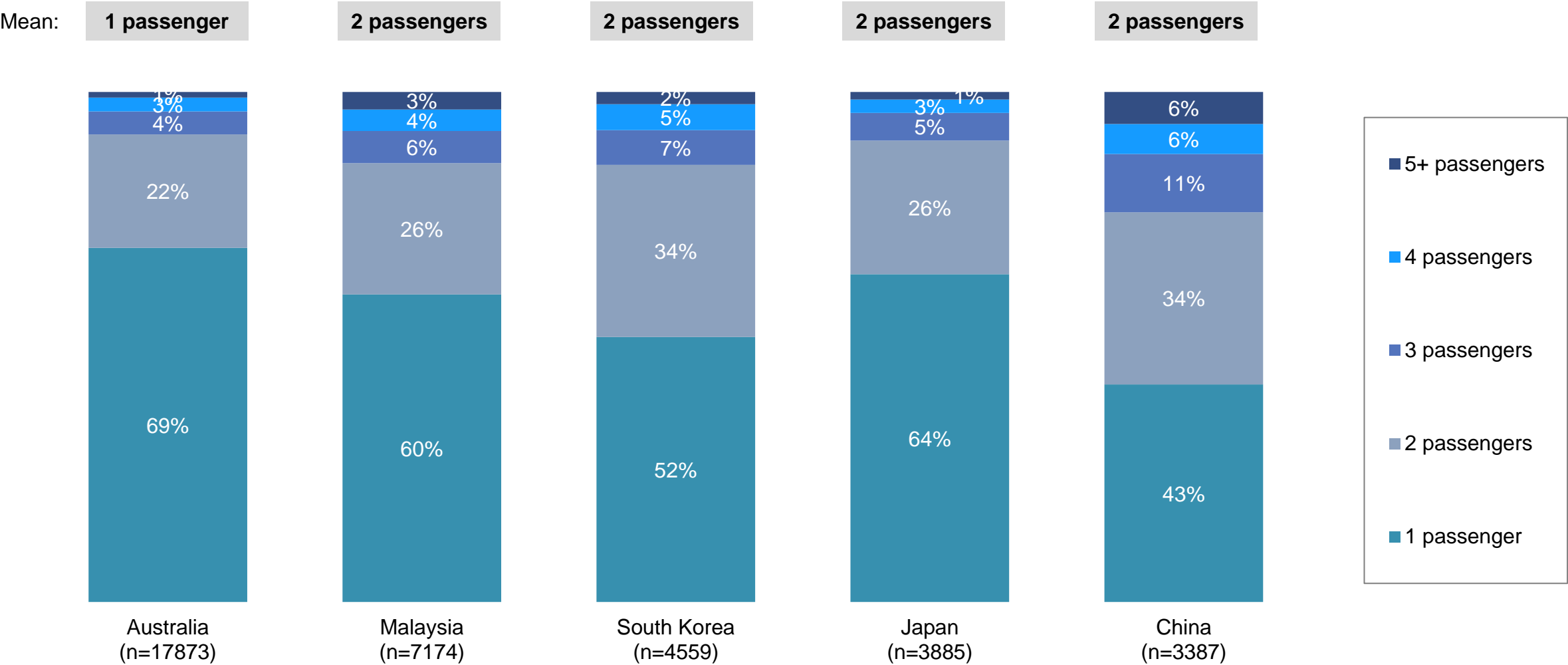
Lead time (duration between the booking date and the date of travel) patterns by country



Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Australians mainly travel solo while Asian markets prefer pairs

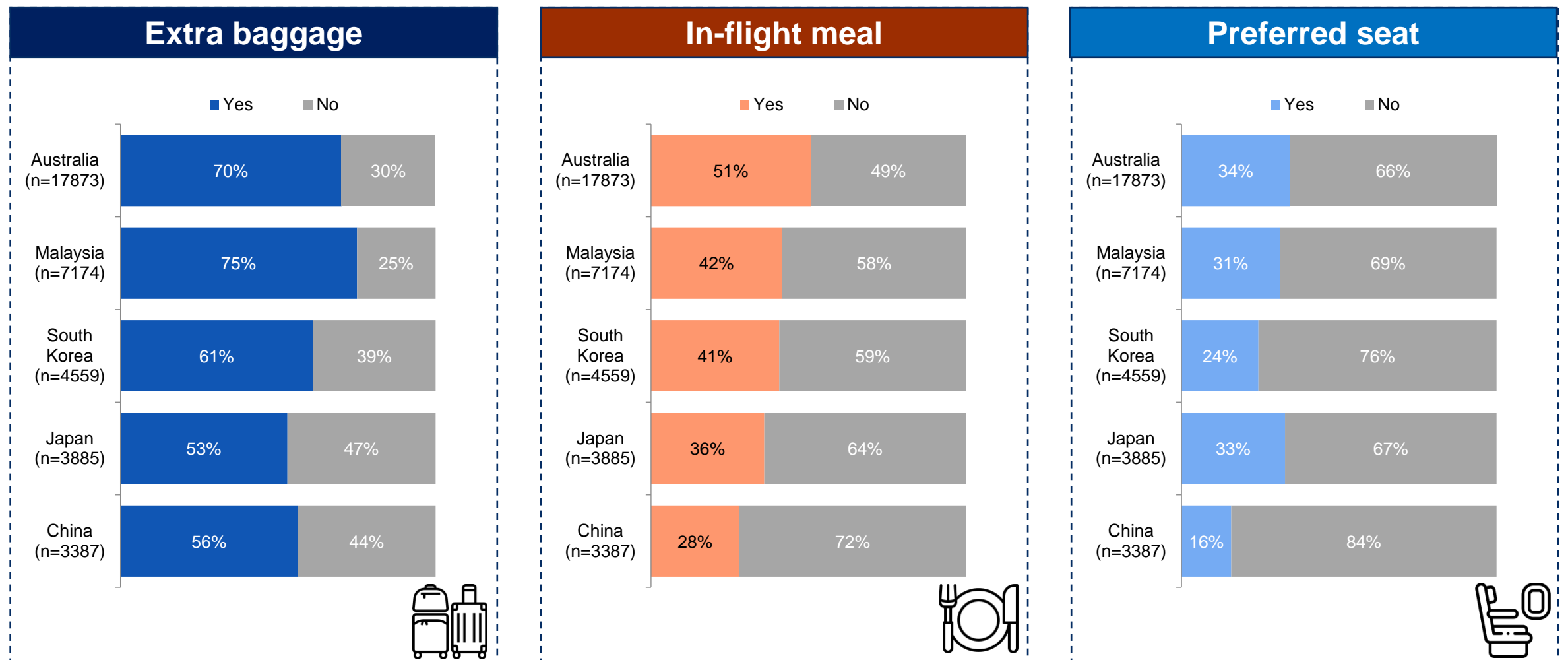
Passenger size by country



Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Extra baggage service were the most preferred compared to other services across all countries

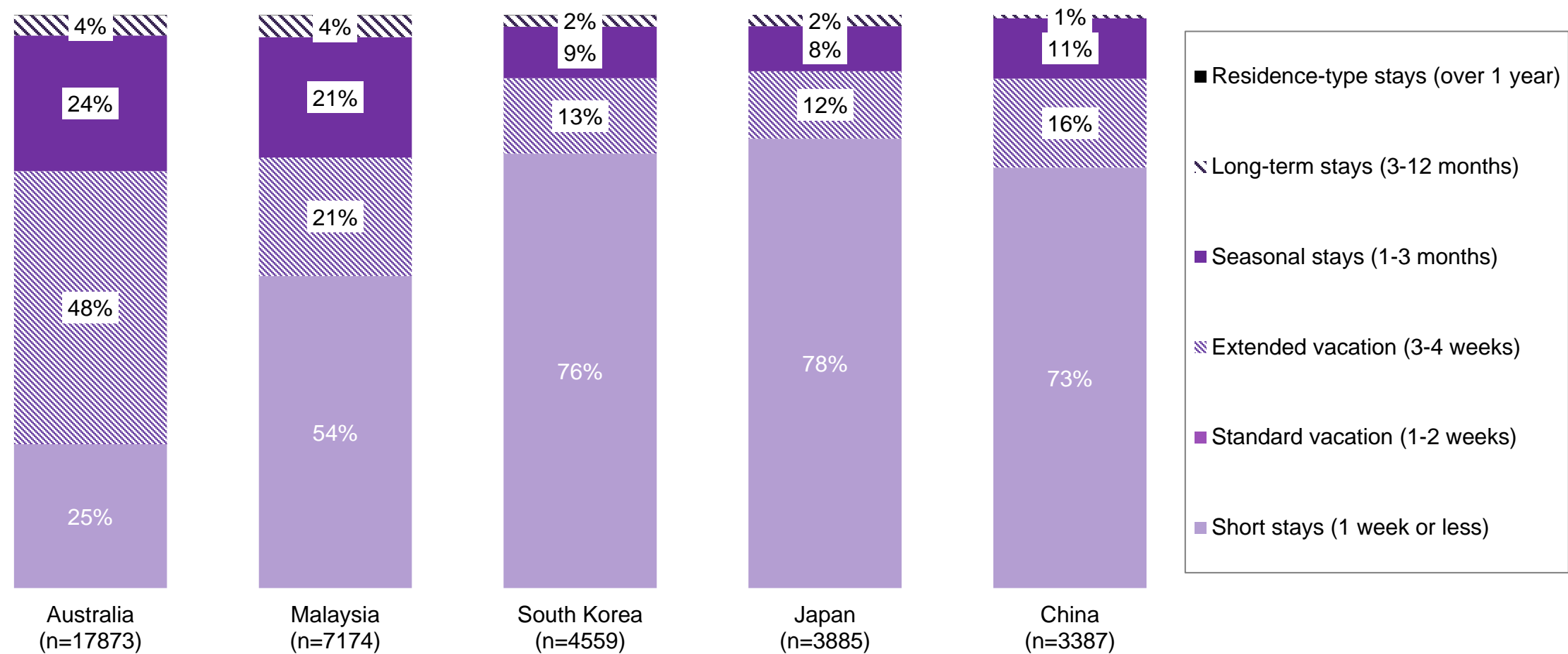
Extra service preferences by country



Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Short stays (<1 week) dominates Asian markets while Australian prefer extended trips

Length of stay by country



Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Morning flight preferred across all markets with slightly more preference for afternoon flight in Japan

Flight hour/day preference by country

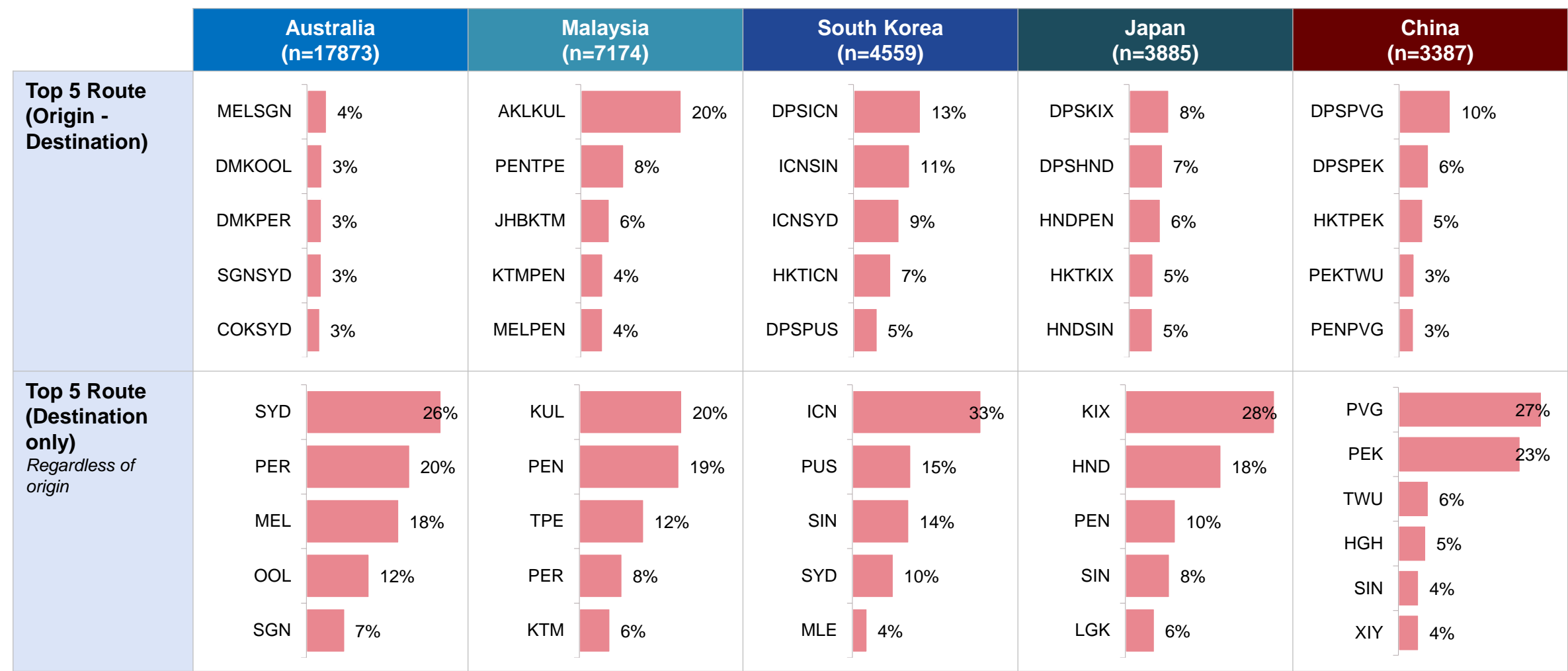
	Australia (n=17873)	Malaysia (n=7174)	South Korea (n=4559)	Japan (n=3885)	China (n=3387)
Morning (6AM - 11PM)	41%	38%	35%	30%	34%
Afternoon (12PM - 5PM)	21%	29%	32%	38%	33%
Evening (6PM - 11PM)	7%	3%	4%	6%	3%
Night (12AM - 5AM)	31%	31%	30%	26%	30%



Flight day preferences demonstrate consistency across all countries, with each day of the week attracting approximately equal booking volumes regardless of country

Each country shows strong preferences for specific destination

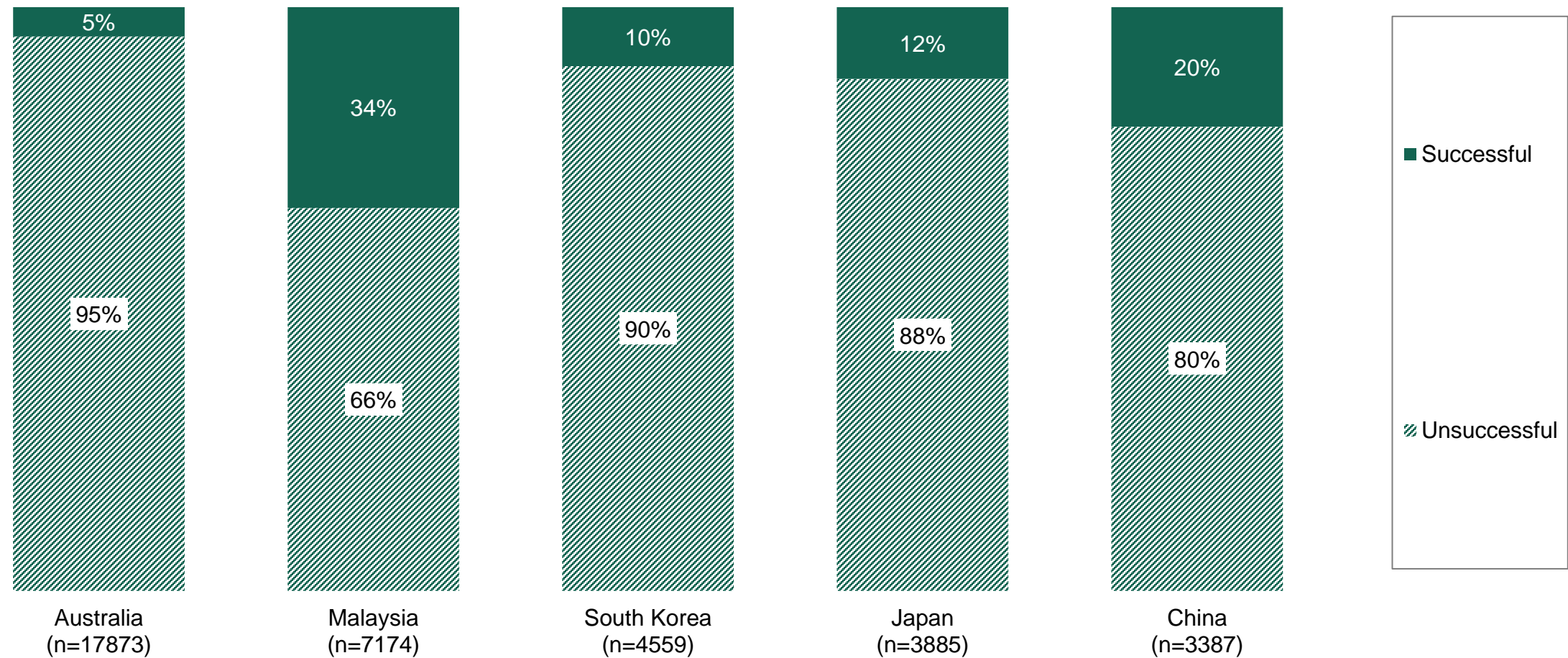
Route preferences by country



Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Malaysia secured the highest successful booking followed by China, despite smaller volume

Conversion rate (successfully booked vs not) by country



Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Section 2: Top Route Performance Analysis

Australia's primary routes all suffer from conversion rates under 7% despite representing the largest market

Australia: Top 5 route analysis

	MEL - SGN Melbourne - Vietnam (n=721)	DMK - OOL Bangkok, Thailand - Gold Coast (n=545)	DMK - PER Bangkok, Thailand - Perth (n=529)	SGN - SYD Vietnam - Sydney (n=527)	COK - SYD Kerala, India - Sydney (n=468)
Mean lead time <small>(duration between the booking date and the date of travel)</small>	87 days	72 days	62 days	93 days	83 days
Mean number of passenger	1 passenger	1 passenger	1 passenger	1 passenger	2 passengers
Most common length of stay					
Extra service <div>■ Extra baggage ■ In-flight meal ■ Preferred seat</div>					
Sales channel Internet : Mobile	96% : 4%	92% : 8%	88% : 13%	95% : 5%	93% : 7%
Conversion rate <div>■ Successful ■ Unsuccessful</div>					

Base: All booking attempts in the dataset, including both successful and unsuccessful conversions



Higher conversion evidenced across all Malaysia top routes with strong preferences for extra baggage service for routes with shortest lead time

Malaysia: Top 5 route analysis

Please note that M'sia stands for Malaysia

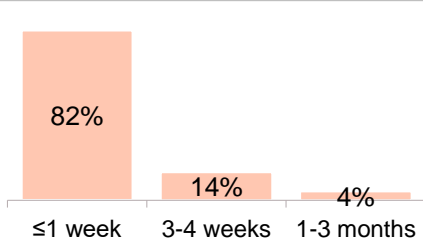
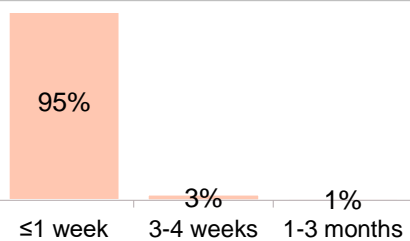
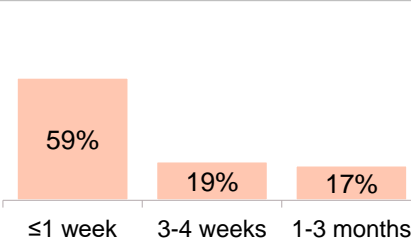
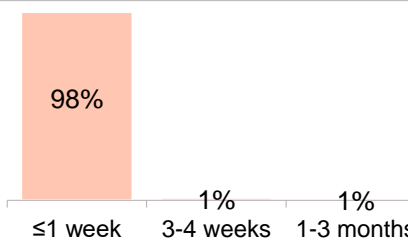
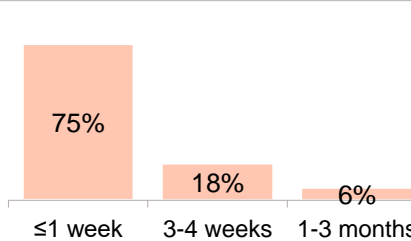
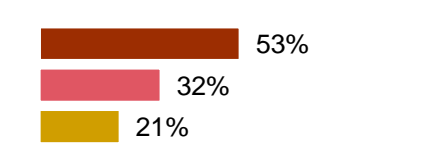
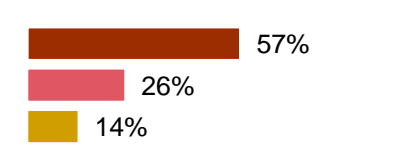
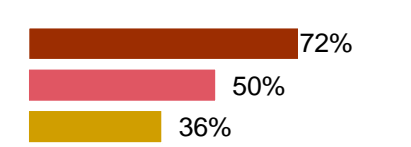
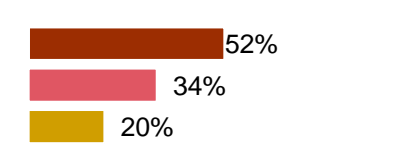
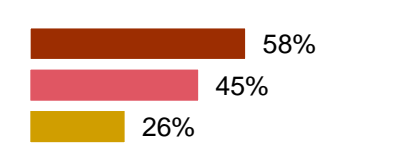
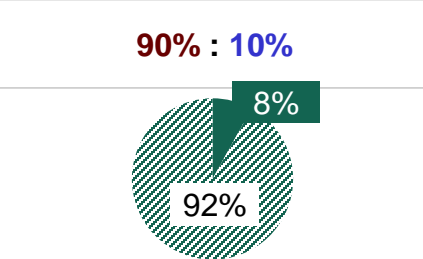
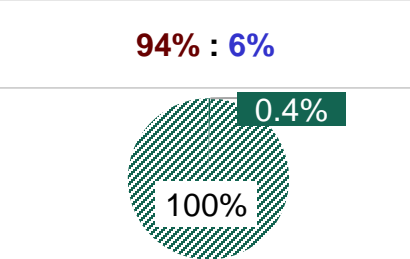
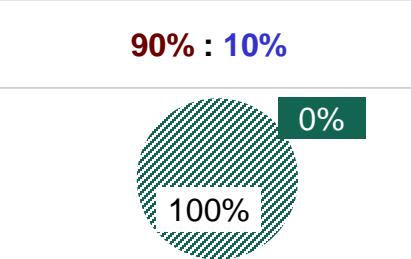
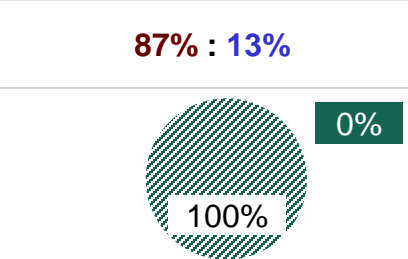
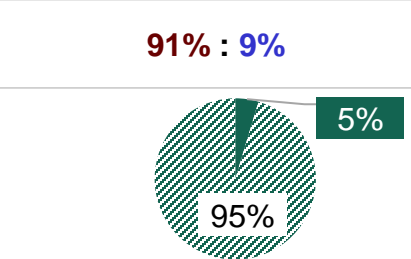
	AKL - KUL Auckland - KL, M'sia (n=1404)	PEN - TPE Penang, M'sia - Taiwan (n=600)	JHB - KTM Johor, M'sia - Nepal, India (n=399)	KTM - PEN Nepal, India - Penang, M'sia (n=309)	MEL - PEN Melbourne - Penang, M'sia (n=305)
Mean lead time <small>(duration between the booking date and the date of travel)</small>	131 days	71 days	23 days	25 days	65 days
Mean number of passenger	2 passengers	2 passengers	1 passenger	1 passenger	2 passengers
Most common length of stay					
Extra service					
Sales channel Internet : Mobile	90% : 10%	88% : 13%	97% : 3%	99% : 1%	86% : 14%
Conversion rate					

Base: All booking attempts in the dataset, including both successful and unsuccessful conversions



South Korean routes show alarming conversion failure with three routes at 0% success rate

South Korea: Top 5 route analysis

	DPS - ICN Bali, Indonesia - Incheon, S. Korea (n=607)	ICN - SIN Incheon, S. Korea - Singapore (n=507)	ICN - SYD Icheon, S. Korea - Sydney (n=412)	HKT - ICN Phuket, Thailand - Incheon, S. Korea (n=338)	DPS - PUS Bali, Indonesia - Busan, S. Korea (n=215)
Mean lead time <small>(duration between the booking date and the date of travel)</small>	108 days	101 days	91 days	99 days	108 days
Mean number of passenger	2 passengers	2 passengers	1 passenger	2 passengers	2 passengers
Most common length of stay					
Extra service <div>■ Extra baggage</div> <div>■ In-flight meal</div> <div>■ Preferred seat</div>					
Sales channel Internet : Mobile	90% : 10%	94% : 6%	90% : 10%	87% : 13%	91% : 9%
Conversion rate <div>■ Successful</div> <div>■ Unsuccessful</div>					

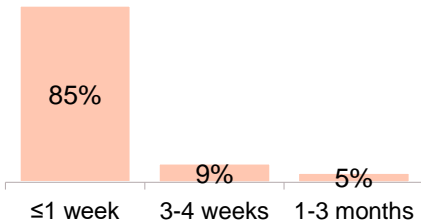
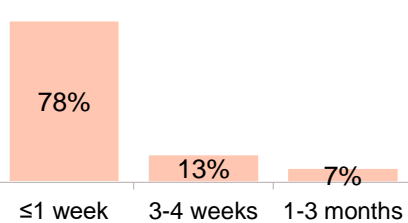
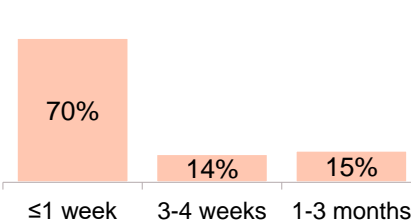
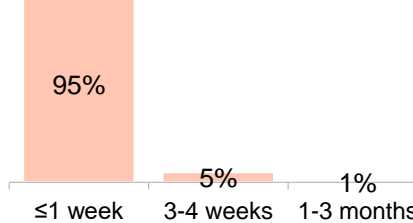
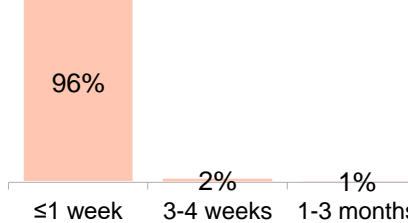
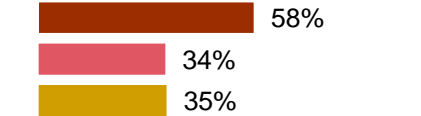
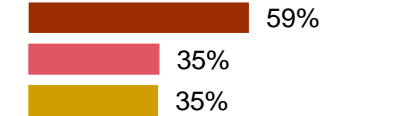
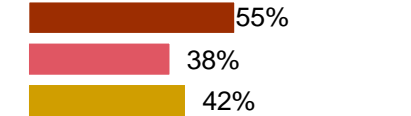
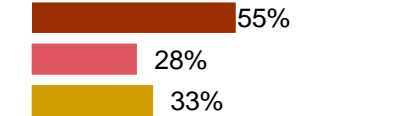
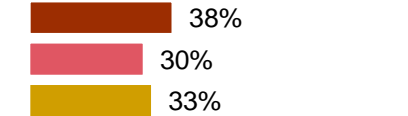
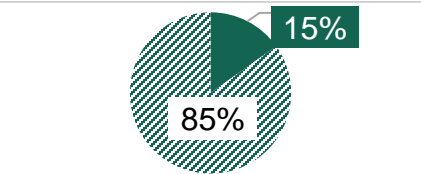
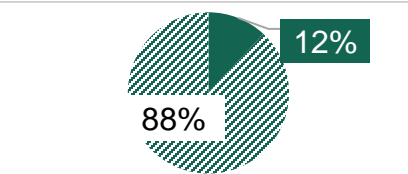
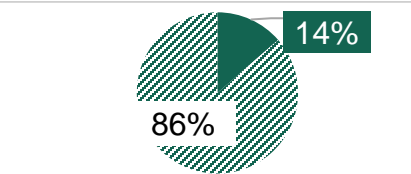
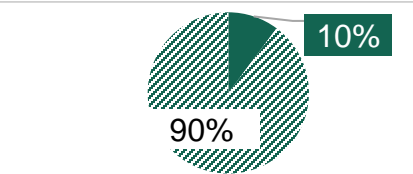
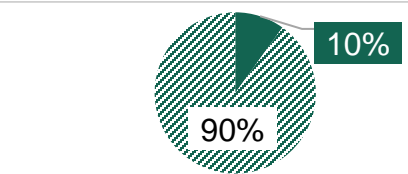
Base: All booking attempts in the dataset, including both successful and unsuccessful conversions



Japanese routes show consistent 10-15% conversion rates with minimal variation between destinations

Japan: Top 5 route analysis

Please note that M'sia stands for Malaysia

	DPS - KIX Bali, Indonesia - Osaka, Japan (n=310)	DPS - HND Bali, Indonesia - Tokyo, Japan (n=260)	HND - PEN Tokyo, Japan - Penang, M'sia (n=243)	HKT - KIX Phuket, Thailand - Osaka, Japan (n=186)	HND - SIN Tokyo, Japan - Singapore (n=181)																																								
Mean lead time <small>(duration between the booking date and the date of travel)</small>	95 days	96 days	84 days	83 days	70 days																																								
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Most common length of stay	 <table><tr><th>Length of stay</th><th>Percentage</th></tr><tr><td>≤1 week</td><td>85%</td></tr><tr><td>3-4 weeks</td><td>9%</td></tr><tr><td>1-3 months</td><td>5%</td></tr></table>	Length of stay	Percentage	≤1 week	85%	3-4 weeks	9%	1-3 months	5%	 <table><tr><th>Length of stay</th><th>Percentage</th></tr><tr><td>≤1 week</td><td>78%</td></tr><tr><td>3-4 weeks</td><td>13%</td></tr><tr><td>1-3 months</td><td>7%</td></tr></table>	Length of stay	Percentage	≤1 week	78%	3-4 weeks	13%	1-3 months	7%	 <table><tr><th>Length of stay</th><th>Percentage</th></tr><tr><td>≤1 week</td><td>70%</td></tr><tr><td>3-4 weeks</td><td>14%</td></tr><tr><td>1-3 months</td><td>15%</td></tr></table>	Length of stay	Percentage	≤1 week	70%	3-4 weeks	14%	1-3 months	15%	 <table><tr><th>Length of stay</th><th>Percentage</th></tr><tr><td>≤1 week</td><td>95%</td></tr><tr><td>3-4 weeks</td><td>5%</td></tr><tr><td>1-3 months</td><td>1%</td></tr></table>	Length of stay	Percentage	≤1 week	95%	3-4 weeks	5%	1-3 months	1%	 <table><tr><th>Length of stay</th><th>Percentage</th></tr><tr><td>≤1 week</td><td>96%</td></tr><tr><td>3-4 weeks</td><td>2%</td></tr><tr><td>1-3 months</td><td>1%</td></tr></table>	Length of stay	Percentage	≤1 week	96%	3-4 weeks	2%	1-3 months	1%
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Extra service <div><div>Extra baggage</div><div>In-flight meal</div><div>Preferred seat</div></div>	 <table><tr><th>Service</th><th>Percentage</th></tr><tr><td>Extra baggage</td><td>58%</td></tr><tr><td>In-flight meal</td><td>34%</td></tr><tr><td>Preferred seat</td><td>35%</td></tr></table>	Service	Percentage	Extra baggage	58%	In-flight meal	34%	Preferred seat	35%	 <table><tr><th>Service</th><th>Percentage</th></tr><tr><td>Extra baggage</td><td>59%</td></tr><tr><td>In-flight meal</td><td>35%</td></tr><tr><td>Preferred seat</td><td>35%</td></tr></table>	Service	Percentage	Extra baggage	59%	In-flight meal	35%	Preferred seat	35%	 <table><tr><th>Service</th><th>Percentage</th></tr><tr><td>Extra baggage</td><td>55%</td></tr><tr><td>In-flight meal</td><td>38%</td></tr><tr><td>Preferred seat</td><td>42%</td></tr></table>	Service	Percentage	Extra baggage	55%	In-flight meal	38%	Preferred seat	42%	 <table><tr><th>Service</th><th>Percentage</th></tr><tr><td>Extra baggage</td><td>55%</td></tr><tr><td>In-flight meal</td><td>28%</td></tr><tr><td>Preferred seat</td><td>33%</td></tr></table>	Service	Percentage	Extra baggage	55%	In-flight meal	28%	Preferred seat	33%	 <table><tr><th>Service</th><th>Percentage</th></tr><tr><td>Extra baggage</td><td>38%</td></tr><tr><td>In-flight meal</td><td>30%</td></tr><tr><td>Preferred seat</td><td>33%</td></tr></table>	Service	Percentage	Extra baggage	38%	In-flight meal	30%	Preferred seat	33%
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Sales channel Internet : Mobile	79% : 21%	84% : 16%	85% : 15%	84% : 16%	85% : 16%																																								
Conversion rate <div><div>Successful</div><div>Unsuccessful</div></div>	 <table><tr><th>Category</th><th>Percentage</th></tr><tr><td>Successful</td><td>15%</td></tr><tr><td>Unsuccessful</td><td>85%</td></tr></table>	Category	Percentage	Successful	15%	Unsuccessful	85%	 <table><tr><th>Category</th><th>Percentage</th></tr><tr><td>Successful</td><td>12%</td></tr><tr><td>Unsuccessful</td><td>88%</td></tr></table>	Category	Percentage	Successful	12%	Unsuccessful	88%	 <table><tr><th>Category</th><th>Percentage</th></tr><tr><td>Successful</td><td>14%</td></tr><tr><td>Unsuccessful</td><td>86%</td></tr></table>	Category	Percentage	Successful	14%	Unsuccessful	86%	 <table><tr><th>Category</th><th>Percentage</th></tr><tr><td>Successful</td><td>10%</td></tr><tr><td>Unsuccessful</td><td>90%</td></tr></table>	Category	Percentage	Successful	10%	Unsuccessful	90%	 <table><tr><th>Category</th><th>Percentage</th></tr><tr><td>Successful</td><td>10%</td></tr><tr><td>Unsuccessful</td><td>90%</td></tr></table>	Category	Percentage	Successful	10%	Unsuccessful	90%										
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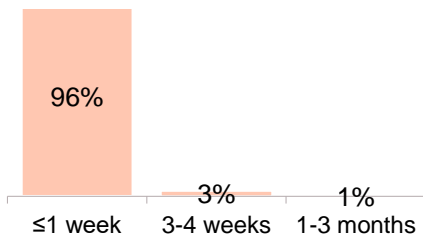
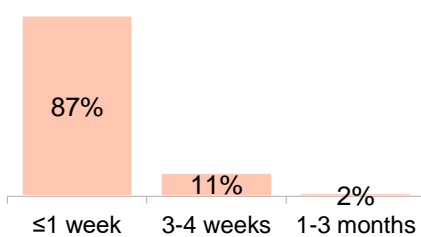
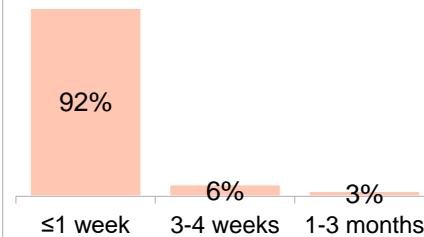
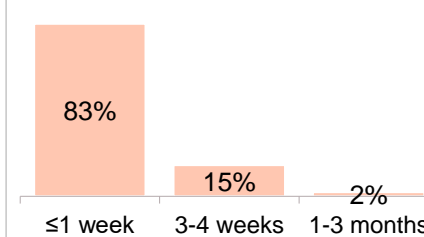
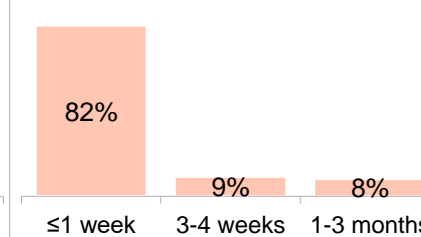
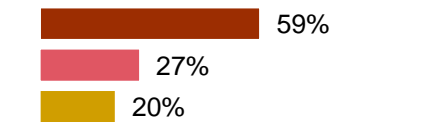
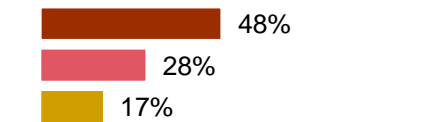
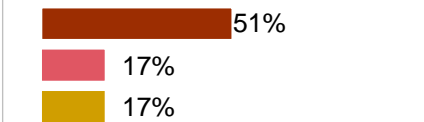
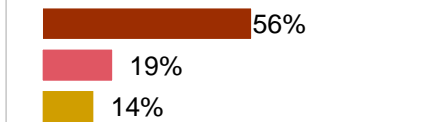
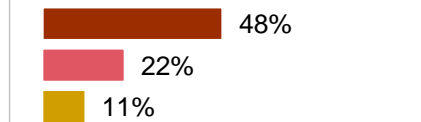
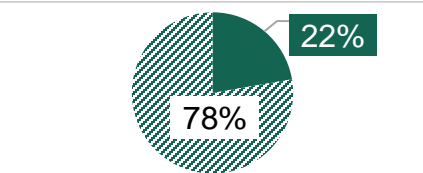
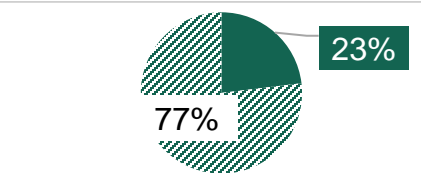
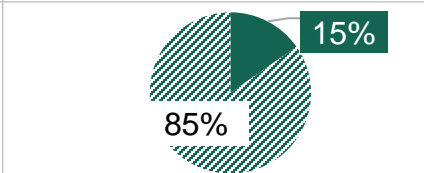
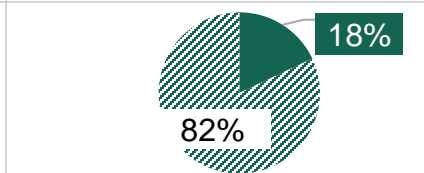
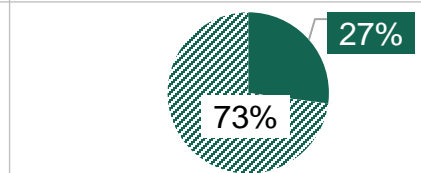
Base: All booking attempts in the dataset, including both successful and unsuccessful conversions



China routes performed well despite their relatively lower booking volumes, with the travelers consistently preferred short stays (<1 week) across all major routes

China: Top 5 route analysis

Please note that M'sia stands for Malaysia

	DPS - PVG Bali, Indonesia - Shanghai, China (n=341)	DPS - PEK Bali, Indonesia - Beijing, China (n=195)	HKT - PEK Phuket, Thailand - Beijing, China (n=157)	PEK - TWU Beijing, China - Tawau, M'sia (n=100)	PEN - PVG Penang, M'sia - Shanghai, China (n=96)
Mean lead time <small>(duration between the booking date and the date of travel)</small>	100 days	82 days	74 days	87 days	69 days
Mean number of passenger	2 passengers	2 passengers	2 passengers	2 passengers	2 passengers
Most common length of stay					
Extra service <div><div>Extra baggage</div><div>In-flight meal</div><div>Preferred seat</div></div>					
Sales channel Internet : Mobile	74% : 26%	86% : 14%	80% : 20%	82% : 18%	77% : 23%
Conversion rate <div><div>Successful</div><div>Unsuccessful</div></div>					

Base: All booking attempts in the dataset, including both successful and unsuccessful conversions



THANK YOU